

WE CLAIM:

1. A method for making an active layer to deliver a volatile substance, the method comprising:
 - providing a polymer solution including a polymer, a solvent, and the volatile substance;
 - applying the polymer solution to a side of a first release liner; and
 - drying the polymer solution to create the active layer.
2. A method in accordance with claim 1, the method further comprises positioning a barrier layer disposed on an opposite side of the active layer from the first release liner.
3. A method in accordance with claim 2, wherein positioning includes
 - attaching the barrier layer to the opposite side of the active layer from the first release liner by a first adhesive layer.
4. A method for making a patch in accordance with claim 2.
5. A method for making a patch in accordance with claim 4, the method further comprises attaching a second release liner to an opposite side of the barrier layer from the active layer by a second adhesive layer.
6. A method for making a patch in accordance with claim 5, wherein the step of attaching a second release liner occurs before the step of attaching the barrier layer.
7. A method for making a patch in accordance with claim 4, wherein the barrier layer is a double coated tape, each side of the double coated tape covered by an adhesive layer; and
 - wherein positioning includes:
 - attaching the double coated tape to the opposite side of the active layer from the first release liner by one of the adhesive layers of the double coated tape.

8. A method for making a patch with a fractional adhesion layer to attach the patch to a surface in accordance with claim 4, the method further comprises applying a fractional adhesion layer to an opposite side of the barrier layer from the active layer, wherein the fractional adhesion layer has an adhesion area that is a fraction of a total area of a side of the barrier layer.

9. A method in accordance with claim 8, wherein applying the fractional adhesion layer includes:

applying an adhesive to the barrier layer only in the adhesion area.

10. A method in accordance with claim 9, wherein applying the fractional adhesion layer includes:

adhering a mask layer to the barrier layer; and

applying an adhesive to the mask layer in an area that is a fraction of the surface of the barrier layer.

11. A method in accordance with claim 8, wherein applying the fractional adhesion layer includes:

applying an adhesive layer to an opposite side of the barrier layer from the active layer; and

applying an intermittent mask layer to cover a portion of the adhesive layer, the mask layer leaving adhesive exposed on the adhesion area of the barrier layer.

12. A method in accordance with claim 11, wherein the intermittent mask layer is one of a perforated film and a film with removed segments.

13. A method in accordance with claim 11, wherein applying the intermittent mask layer includes applying an intermittent protective coating, the intermittent protective coating leaving adhesive exposed on the adhesion area of the barrier layer.

14. A method in accordance with claim 8, wherein the step of applying the fractional adhesion layer occurs before the step of positioning the barrier layer.

15. A method in accordance with claim 8, wherein the barrier layer is a double coated tape, each side of the double coated tape covered with an adhesive layer; and wherein positioning includes:

applying an intermittent mask layer to one adhesive layer of the double coated tape, the intermittent mask layer leaving adhesive exposed on the adhesion area of the barrier layer,

attaching the double coated tape to the active layer with the adhesive layer of the double coated tape opposite the one adhesive layer.

16. A method in accordance with claim 15, wherein the intermittent mask layer is one of a perforated film and a film with removed segments.

17. A method in accordance with claim 15, wherein applying the intermittent mask layer includes applying an intermittent protective coating on one adhesive layer of the double coated tape, the intermittent protective coating leaving adhesive exposed on the adhesion area of the barrier layer.

18. A method in accordance with claim 15, wherein applying the intermittent mask layer occurs before positioning the barrier layer.

19. A method in accordance with claim 1, wherein the polymer solution is hydrophilic.

20. A method in accordance with claim 1, wherein the polymer is a polyurethane.

21. A method in accordance with claim 20; wherein the polyurethane includes polyurethane-1.

22. A method in accordance with claim 1, wherein the volatile substance includes at least one of an aromatherapy agent; an aromatherapy oil, a therapeutic agent, a deodorizer, a perfume, an insect repellent, a botanical extract, a botanical oil, and a masking odor.

23. A method in accordance with claim 1, wherein the polymer solution includes a thickener.
24. A method in accordance with claim 23, wherein the thickener is at least one of xanthan gum, cellulose, polyvinyl pyrrolidone, and carbomer.
25. A method in accordance with claim 23, wherein the thickener is at least one combination of ammonium polyacrylate, isohexadecane and polyethylene glycol-40 castor oil; polyacrylamide, polydecene and ethoxylated lauryl alcohol; polyacrylamide, C₁₃₋₁₄ isoparafin and ethoxylated lauryl alcohol; and polyquaternium 32 and mineral oil.
26. A method in accordance with claim 1, wherein the solvent is at least one of water, alcohol, and glycol.
27. A method in accordance with claim 1, wherein the polymer solution includes a plasticizer.
28. A method in accordance with claim 27, wherein the plasticizer includes a glycol.
29. A method in accordance with claim 1, wherein, in drying, the created active layer is one of a gel, a semi-solid, and a solid.
30. A method for making an active layer to deliver a volatile substance at an enhanced rate in accordance with claim 1, wherein, in applying, the polymer solution is applied to create a surface with a high specific surface area.
31. A method in accordance with claim 30, wherein, applying the polymer solution includes entraining the polymer solution with bubbles to create the surface with the high specific surface area.
32. A method for making a rate controlling active layer to deliver a volatile substance at a controlled rate in accordance with claim 1, wherein the polymer solution includes a rate controlling composition, and the active layer is a rate controlling active layer.

33. A method in accordance with claim 32, wherein the rate controlling composition includes another polymer.

34. A method in accordance with claim 33, wherein the another polymer includes at least one of gum, polyolefin, polyvinyl pyrrolidone, ethylenevinyl acetate copolymer, polyether esteramide, cellulose derivatives, polyethylene, polyester, polystyrene, and polyamide.

35. A method in accordance with claim 32, wherein the rate controlling composition includes at least one of wax, silica, kaolin, chalk, diatomaceous earth, bentonite, titanium dioxide, glass particulates, and metal particulates.

36. A method in accordance with claim 32, wherein the rate controlling composition includes an encapsulating device containing the volatile substance.

37. A method for making an active layer to deliver a volatile substance in a controlled manner, the method comprising:

providing a polymer solution including a polymer, a solvent, and the volatile substance;

applying the polymer solution to a side of a breathable layer, an opposite side of the breathable layer from the polymer solution being covered at least in part by a release liner, the breathable layer controlling the rate of delivery of the volatile substance; and

drying the polymer solution to create the active layer.

38. A device for delivering a volatile substance comprising:

an active layer, the active layer being a dried polymer solution having the volatile substance; and

a first release liner in direct contact with the active layer, and covering a side of the active layer.

39. A device in accordance with claim 38, wherein the polymer solution is hydrophilic.

40. A device in accordance with claim 38, wherein a polymer in the polymer solution is a polyurethane.
41. A device in accordance with claim 40, wherein the polyurethane includes polyurethane-1.
42. A device in accordance with claim 38, wherein the volatile substance includes at least one of an aromatherapy agent; an aromatherapy oil, a therapeutic agent, a deodorizer, a perfume, an insect repellent, a botanical extract, a botanical oil, and a masking odor.
43. A device in accordance with claim 38, wherein the polymer solution includes a thickener.
44. A device in accordance with claim 43, wherein the thickener is at least one of xanthan gum, cellulose, polyvinyl pyrrolidone, and carbomer.
45. A device in accordance with claim 43, wherein the thickener is at least one combination of ammonium polyacrylate, isohexadecane and polyethylene glycol-40 castor oil; polyacrylamide, polydecene and ethoxylated lauryl alcohol; polyacrylamide, C₁₃₋₁₄ isoparafin and ethoxylated lauryl alcohol; and polyquaternium 32 and mineral oil.
46. A device in accordance with claim 38, wherein the polymer solution includes at least one of water, alcohol, and glycol.
47. A device in accordance with claim 38, wherein the polymer solution includes a plasticizer.
48. A device in accordance with claim 47, wherein the plasticizer includes a glycol.
49. A device in accordance with claim 38, wherein, the active layer is one of a gel, a semi-solid, and a solid.

50. A device in accordance with claim 38, wherein a side of the active layer adjacent the first release liner has a higher specific surface area than a smooth surface.
51. A device in accordance with claim 38, wherein the active layer is a rate controlling active layer that includes a rate controlling composition that controls the rate of delivery of the volatile substance.
52. A device in accordance with claim 51, wherein the rate controlling composition includes another polymer.
53. A device in accordance with claim 52, wherein the another polymer includes at least one of gum, polyolefin, polyvinyl pyrrolidone, ethylenevinyl acetate copolymer, polyether esteramide, cellulose derivatives, polyethylene, polyester, polystyrene, and polyamide.
54. A device in accordance with claim 51, wherein the rate controlling composition includes at least one of wax, silica, kaolin, chalk, diatomaceous earth, bentonite, titanium dioxide, glass particulates, and metal particulates.
55. A device in accordance with claim 51, wherein the rate controlling composition includes an encapsulating device containing the volatile substance.
56. A patch for delivering a volatile substance in accordance with claim 38 further comprising:
a barrier layer disposed on an opposite side of the active layer from the first release liner.
57. A patch in accordance with claim 56, wherein the barrier layer is attached to the active layer with an adhesive.
58. A patch in accordance with claim 57, wherein the first release liner is attached to the barrier layer with the adhesive.

59. A patch in accordance with claim 56, wherein a side of the barrier layer has adhesive properties.
60. A patch in accordance with claim 56 further comprising:
a mask layer covering at least a portion of the barrier layer; and
adhesive adjacent to an opposite side of the mask layer from the barrier layer, the adhesive covering an area that is only a fraction of a total area of a side of the barrier layer.
61. A patch in accordance with claim 56 further comprising:
a first adhesive layer adjacent to an opposite side of the barrier layer from the active layer.
62. A patch in accordance with claim 61, wherein the first adhesive layer covers only a fraction of a total area of a side of the barrier layer.
63. A patch in accordance with claim 62, wherein the first adhesive layer is one of a patterned adhesive layer and an intermittent adhesive layer.
64. A patch in accordance with claim 61 further comprising:
an intermittent mask layer covering a portion of the first adhesive layer, the intermittent mask layer leaving adhesive exposed on a fraction of a total area of a side of the barrier layer.
65. A patch in accordance with claim 64, wherein the intermittent mask layer includes at least one of a perforated film and a film with removed segments.
66. A patch in accordance with claim 64, wherein the intermittent mask layer includes an intermittent protective coating.
67. A patch in accordance with claim 56 further comprising:
a second release liner attached to an opposite side of the barrier layer from the active layer.

68. A patch in accordance with claim 56, wherein the active layer has adhesive properties.

69. A patch for delivering a volatile substance, the patch made in accordance with claim 4.

70. A patch with multiple release liners for delivering a volatile substance at a controlled rate, the patch comprising:

- an active layer having the volatile substance;
- at least two release liner segments covering one side of the active layer; and
- a barrier layer disposed on an opposite side of the active layer from the at least two release liner segments;

wherein the release of the volatile substance depends upon the number of release liner segments removed from the active layer.

71. A patch in accordance with claim 70 further comprising:

- a breathable layer disposed between the release liner segments and the active layer, the breathable layer hindering the rate of delivery of the volatile substance.

72. A patch in accordance with claim 70, wherein at least one release liner segment overlaps another release liner segment.

73. A patch in accordance with claim 70, wherein at least two release liner segments are adjacent to each other.

74. A patch in accordance with claim 70, wherein the active layer is a dried polymer solution.

75. A reduced adhesion patch for delivering a volatile substance, the patch comprising:

- an active layer having the volatile substance;
- a barrier layer attached to the active layer; and

a fractional adhesion layer adjacent to an opposite side of the barrier layer from the active layer, the fractional adhesion layer having an adhesion area that is a fraction of the total area of a side of the barrier layer.

76. A reduced adhesion patch in accordance with claim 75, wherein the fractional adhesion layer includes adhesive adjacent to the opposite side of the barrier layer from the active layer, the adhesive covering only a fraction of the total area of the opposite side of the barrier layer.

77. A reduced adhesion patch in accordance with claim 75, wherein the fractional adhesion layer includes:

 a mask layer attached to an opposite side of the barrier layer from the active layer; and

 adhesive adjacent to an opposite side of the mask layer from the barrier layer, the adhesive covering an area that is only a fraction of the total area of the opposite side of the barrier layer.

78. A reduced adhesion patch in accordance with claim 75, wherein the fractional adhesion layer includes:

 an adhesive layer adjacent to an opposite side of the barrier layer from the active layer; and

 an intermittent mask layer covering a portion of the adhesive layer, the intermittent mask layer leaving adhesive exposed on a fraction of the total area of a side of the barrier layer.

79. A patch in accordance with claim 78, wherein the intermittent mask layer includes at least one of a perforated film and a film with removed segments.

80. A patch in accordance with claim 78, wherein the intermittent mask layer includes an intermittent protective coating.

81. A patch in accordance with claim 78, wherein the active layer is a dried polymer solution.